

CLAIMS:

Sub A1 1. A lubricating oil composition characterized by comprising a lubricating base oil and additives consisting essentially of:

(a) sulfoxymolybdenum dithiocarbamate containing a hydrocarbon group having 8 to 18 carbon atoms,

(b) zinc dialkyldithiophosphate selected from the group consisting of zinc dialkyldithiophosphate containing a primary alkyl group having 1 to 18 carbon atoms, a mixture of zinc dialkyldithiophosphate containing a primary alkyl group having 1 to 18 carbon atoms and zinc dialkyldithiophosphate containing a secondary alkyl group having 1 to 18 carbon atoms, zinc dialkyldithiophosphates containing a primary alkyl group having 1 to 18 carbon atoms and a secondary alkyl group having 1 to 18 carbon atoms, and mixture thereof,

(c) a mixture of 100 to 50% by weight of calcium alkylsalicylate and 0 to 50% by weight of magnesium alkylsalicylate,

the amount of molybdenum derived from the sulfoxymolybdenum dithiocarbamate being from 200 to 1000 ppm (weight basis) of the total weight of the composition,

the amount of phosphorus derived from the zinc dialkyldithiophosphate being from 0.04 to 0.15% by weight of the total weight of the composition, and

the total amount of the calcium alkylsalicylate and the magnesium alkylsalicylate being from 0.5 to 10% by weight of the total weight of the composition.

2. A lubricating oil composition characterized by comprising a lubricating base oil and additives consisting essentially of:

(a) sulfoxymolybdenum dithiocarbamate containing a hydrocarbon group having 8 to 18 carbon atoms,

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(b) zinc dialkyldithiophosphate selected from the group consisting of zinc dialkyldithiophosphate containing a primary alkyl group having 1 to 18 carbon atoms, a mixture of zinc dialkyldithiophosphate containing a primary alkyl group having 1 to 18 carbon atoms and zinc dialkyldithiophosphate containing a secondary alkyl group having 1 to 18 carbon atoms, zinc dialkyldithiophosphate containing a primary alkyl group containing 1 to 18 carbon atoms and a secondary alkyl group containing 1 to 18 carbon atoms, and mixtures thereof,

(c) a mixture of 100 to 50% by weight of calcium alkylsalicylate and 0 to 50% by weight of magnesium alkylsalicylate, and

(d) succinimide containing boron,

the amount of molybdenum derived from the sulfoxymolybdenum dithiocarbamate being from 200 to 1000 ppm (weight basis) of the total weight of the composition,

the amount of phosphorus derived from the zinc dialkyldithiophosphate being from 0.04 to 0.15% by weight of the total weight of the composition,

the total amount of the calcium alkylsalicylate and the magnesium alkylsalicylate being from 0.5 to 10% by weight of the total weight of the compositions,

the amount of boron derived from the succinimide containing boron being from 0.05 to 0.06% by weight of the total weight of the composition, and the boron/nitrogen ratio regarding the number of atoms containing in the succinimide containing boron is from 0.05 to 1.5.

3. The lubricating oil composition of claim 1 or 2 wherein the lubricating base oil is a hydrocracked oil and/or a wax isomerized oil containing 3% by weight or less aromatics, a sulfur content of 50 ppm or less and a nitrogen content of 50 ppm or less.

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4. The lubricating oil composition of claim 1 or 2 wherein the primary or secondary alkyl group of the zinc dialkyldithiophosphate contain 3 to 12 carbon atoms.

5. The lubricating oil composition of claim 1 or 2 having a total base number of 3 to 10.

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